

# BUFF & BUFF MFG. CO.

## Manufacturers of Surveying Instruments

NEW YORK OFFICE  
Hudson Terminal, 46 Dey Street

Jamaica Plain Station  
BOSTON, MASS.

CHICAGO OFFICE  
231 North Welles Street

### Products.

"Buff" TRANSIT and LEVELS.

Theodolites, Tripods, Levelling Rods, Plumb Bobs, Plummet Lamps, Steel Tapes, Range Poles, Marking Pins and Current Meters.

### Repairs to Instruments.

"Buff" transits, solidly built to resist blows and falls, have metal generously distributed throughout the construction. At the Jamaica Plain Shops, all makes are repaired with economy and despatch. Injured parts of instruments are duplicated from stock in hand. Telegraph orders can be completed in 24 hours.

### Specifications 6¼-inch Buff "Precise" Transit No. 1B.

Graduation, 6¼-in. diameter, with 2 opposite double reading verniers to minutes, placed at either 30° or 90° to line of sight. Two rows of opposite inclined figures 0-360. Graduations silvered and covered by pure crystal plate glass.

Telescope, erecting, is balanced and reverses at either end; 12 in. long, 1¼-in. aperture, with power of 26.5 diameter improved eyepiece, unsurpassed large clear field. Center point is provided on top of telescope to permit of accurate centering from above. Adjustment for vertical plane, and line of collimation correct for all distances. Sensitive level bubble, 6 in. long, with clamp and tangent to telescope. Improved lower and upper spring tangent clamps. Shifting center with ¾-in. adjustment. Spirit levels truly ground by special machine, rated and sensitive. Standards are cloth finished. Long taper centers with broad flanges and of hardest bell-metal and phosphor bronze. Compass needle is 4½ in. long and of accepted form. Compass graduation is silvered and figured with a single row 0-90 on each side of N. and S. Tripod improved, split-leg with wing-nuts, weight 7½ lbs.

Mahogany instrument box is provided with strap, brass lock and hooks; contains plumb bob, pocket magnifier, sunshade, wrench, screwdriver, adjusting pins, etc.

### Engineers' Levels.

18-INCH WYE LEVEL—Telescope, 18 in.; 1⅜-in. objective; 36 power; protection to object slide; erecting or inverting eyepiece. Telescope and level tube, cloth finished. Phosphor bronze contact points in wyes for bell-metal collars; hard bell-metal center in socket of phosphor bronze. Line of collimation correct for all distances. Adjusted to finest possible accuracy with sunshade in position and focused on mean distance. Mahogany case with strap and hooks, sunshade, wrench, screwdriver, adjusting pin, etc.

Weight, 10¾ lbs.; tripod, 7 lbs. Price, \$168.00

18-INCH DUMPY LEVEL—36 power. Price, \$134.00.

### References.

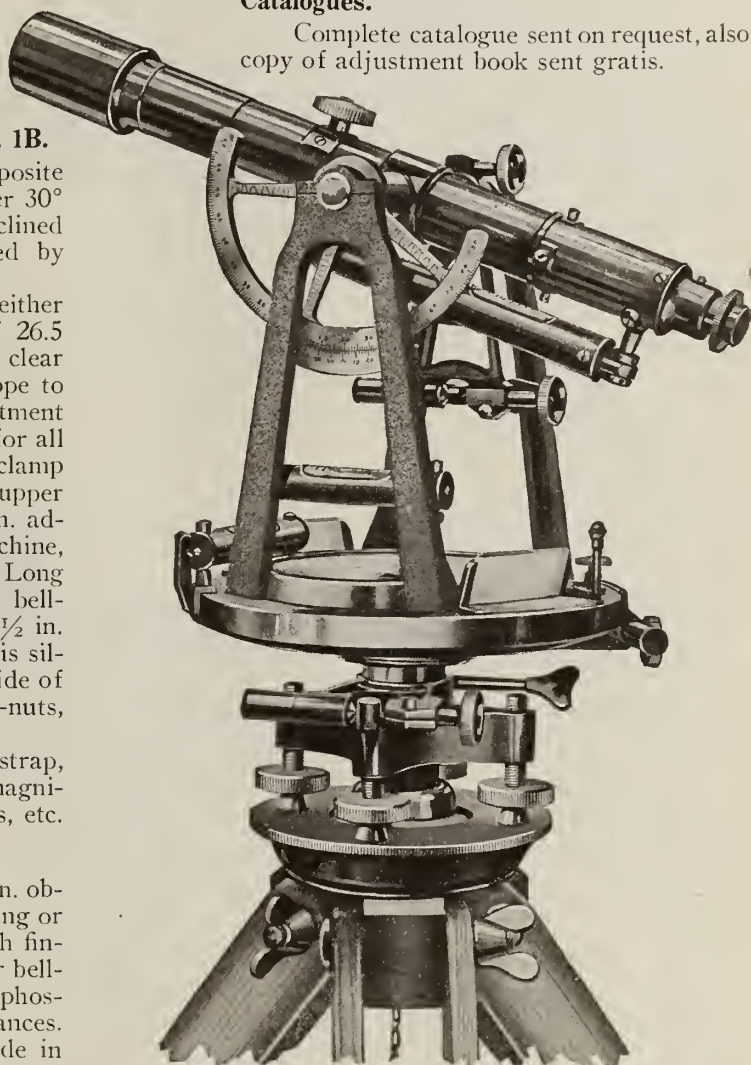
This company are Instrument Makers to the United States Government, many departments; New York Central R. R.; New York, New Haven & Hartford R. R.; New York Water Board; Public Service Commission and Board of Public Works, New York City; Standard

Oil Co.; Guggenheim and Rothschild interests; J. G. White Co., and numberless other engineering organizations. The Pennsylvania R. R. used "Buff" instruments in large numbers in both their North River and East River tunnels. The Subway Commission of New York are now using 150 "Buff" instruments.

Names and addresses of experienced users of "Buff" instruments in the vicinity of any interested inquirer will be furnished on application.

### Catalogues.

Complete catalogue sent on request, also copy of adjustment book sent gratis.



6¼-INCH BUFF "PRECISE" TRANSIT NO. 1B

Patented Nov. 6, 1900; Nov. 13, 1900; Feb. 3, 1903

Price as shown.....\$295.00

Size.....	No. 1	No. 2	No. 3	No. 4
Weight.....	13½ lbs.	10 lbs.	7 lbs.	5 lbs.
Diam. of graduation....	6¼ in.	5½ in.	4½ in.	4 in.
Length of needle.....	4½ in.	3¾ in.	3¼ in.	2½ in.
Power erecting telescope.	26.5 diam.	22.5 diam.	18 diam.	17 diam.
Power inverting telescope	29 diam.	25 diam.	21 diam.	20 diam.
Length of telescope.....	12 in.	10¾ in.	8 in.	8 in.
Length level bubble.....	6 in.	5½ in.	4 in.	4 in.
Diam. telescope aperture	1¼ in.	1¼ in.	1½ in.	1½ in.